

MEMO TO DIRECTORS OF WIRED-WIRELESS STATIONS

I want to raise six questions, with you, concerning our attempts to present the case of wired-wireless to the Federal Communications Commission. I will appreciate it if you will answer these five questions at the earliest opportunity.

(1) Will you present your case to the Congressmen and Senators from your state and ask them, in turn, to present it to the Federal Communications Commission?

It isn't too early to start presenting your case to the Commission through the duly elected representatives of the people of your state. Some colleges have already begun to do this and I hope that you will take up the battle.

Will you indicate to me the names of the men you contact and the reactions which you receive? It goes without saying that you will probably want to contact people other than Congressmen. In any event, I hope that you will do what you can to help insure a fair hearing for our case.

(2) Would you secure and send along to me statements from the commercial stations in your area indicating their reactions to your station and to interference from your station?

Undoubtedly some of the criticism of college wired-wireless has come from commercial radio stations. It would be helpful if we could gather positive statements from stations which are contiguous to wired-wireless operations; that is statements which are favorable. If the statements are not favorable, we would like to know that, too, because we can handle this job only by finding and analyzing the actual facts. It would be an excellent idea for you to accomplish this task within the next few days.

(3) Would you kindly give me an estimate of your budget?

I raise this point because it is probable that the argument will be raised that all wired-wireless stations should shift to FM. My studies indicate that many colleges are not spending enough money (1) either to purchase the equipment for an FM station, or, (2) to carry on a day-to-day operation of such a station. In other words, if colleges were forced to use FM many of them would be unable to continue to offer this practical training in broadcasting. Thus the size of your budget becomes an important factor. The FCC will need to have this type of information if they are to completely evaluate the problems which are to be confronted in connection with wired-wireless.



(4) Will you sound out regional representatives of the National Association of Broadcasters concerning their reaction to wired-wireless?

It would help if we could secure the support of NAB and the best way to secure that support is for you to create interest among NAB members in your area. Broadcasting Yearbook carries a list of key committee members and you will undoubtedly be able to contact some of them. It would be very helpful if NAB members would write to Justin Miller saying that NAB should concern itself with our problem.

If you do successfully contact NAB members I would like to know about it. If you encounter opposition I would like to know specifically about that also.

(5) Have you had a field strength test?

We need this information and apparently very few schools have made any effort to provide this information. It may be that you can't afford to provide such information. If this is true, I wish you would indicate that. I think it is clear that the FCC would expect to have this information on all stations, particularly would this be true in the case of a continuation of wired-wireless operations under closer FCC supervision. We would undoubtedly have to supply this information at stated intervals.

(6) Will you supply information concerning the number of students who are actually receiving broadcasting training on your wired-wireless station at this time?

Both the FCC and NAB should be interested in the amount of training we are offering and this training can partially be measured by the number of students involved.

This letter is going out to some schools who have not replied concerning this problem. I would like to emphasize the fact to those people that the situation which faces wired-wireless is real and important and it will be decided within the next few months. If you are going to make some defense of your wired-wireless operation, you should do it now. If you do not care to pool your efforts with the rest of us who are working in this field, I suggest that you contact the FCC and make arrangements to make your own presentation when hearings are held on this matter.

Cordially yours,

*Hale Aarnes*  
Hale Aarnes, Chairman  
Radio Education Department



Mr. 22 March  
1949

Mr Herbert  
B. Barlow Jr.

Dear Mr.  
Barlow;  
Since receiving  
your letter...

Player's  
News  
clipping

The Case  
for WHRC



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FEDERAL COMMUNICATIONS COMMISSION  
Washington 25, D. C.

In the Matter of )  
Amendment of Part 15 of the ) DOCKET NO. 9288  
Commission's Rules Governing )  
Restricted Radiation Devices )

SUGGESTED AMENDMENT TO PART 3 OF THE COMMISSION'S RULES GOVERNING  
RADIO BROADCAST SERVICES

Subpart G - Rules Governing Nonprofit Educational AM Broadcast Stations

DEFINITIONS AND ALLOCATION OF FREQUENCIES

3.801 **Defined.** The term "nonprofit educational AM broadcast station" means a nonprofit station licensed for the transmission by carrier current of broadcast programs to be received by the public primarily on property owned or used by an institution of higher learning.

3.802 **Carrier current.** Carrier current is a method of transmission of radio-frequency energy over a system of conductors to provide limited area reception within the induction field surrounding the conductors.

3.803 **Licensing requirements and service.** The operation of, and the service furnished by nonprofit educational AM broadcast stations shall be governed by the following:

- (a) A nonprofit educational AM broadcast station will be licensed only to a nonprofit organization on a campus of an accredited institution of higher learning and upon showing that the station has been approved by an officer of such institution.
- (b) In determining the eligibility of an institution, the accreditation of state departments of education and/or recognized regional and national educational accrediting organizations shall be taken into consideration.
- (c) Each station shall furnish a nonprofit broadcast service. A station shall not transmit the programs of other classes of broadcast stations unless their call letters and all commercial announcements and commercial references in the continuity are eliminated.

3.804 **Frequency, power, and service area.** (a) A nonprofit educational AM broadcast station will normally be licensed for operation on the lowest standard broadcast channel in the broadcast band which will not cause or be subject to objectional interference.

(b) No carrier frequency shall be employed within 10 kilocycles per second of the carrier frequency employed by any standard station whose 100 microvolt per meter contour encloses any part of the service area of the station or within 20 kilocycles per second of any station whose 500 microvolt per meter contour encloses any part of the service area of the station.

(c) Each nonprofit educational AM broadcast station shall use the minimum amount of power necessary to provide satisfactory coverage of the property owned or used by the institution of higher learning.

(d) ~~Frequency, power, and service area, the operation of, and the service furnished by nonprofit educational AM broadcast stations shall be governed by the following:~~

(a) A nonprofit educational AM broadcast station will be licensed only to a nonprofit organization on a campus of an accredited institution of



## RULES GOVERNING ADMINISTRATIVE PROCEDURE

3.811 Application for nonprofit educational AM broadcast stations. Each applicant for a construction permit for a new nonprofit educational AM broadcast station, or nonprofit educational AM broadcast station license or modification of license shall file with the Commission in Washington, D. C., two copies of applications on the appropriate form designated by the Commission and a like number of exhibits and other papers incorporated therein and made a part thereof. Only the original copy need be sworn to.

3.812 Full disclosures. Each application shall contain full and complete disclosures with regard to all matters and things required to be disclosed by the application forms.

3.813 Installation of apparatus. Applications for construction permit or modification thereof, involving installation of new transmitting apparatus, shall be filed at least 30 days prior to the contemplated installation.

3.814 Period of construction. Each construction permit will specify a maximum of 12 months from the date of granting thereof as the time within which construction of the station shall be completed and the station ready for operation, unless otherwise determined by the Commission upon proper showing in any particular case. Each construction permit shall bear the date of the Commission's action authorizing the issuance of the construction permit. Where a conditional grant is ordered, the construction permit shall be dated as of the time when all conditions have been satisfied.

3.815 Forfeiture of construction permits - extension of time. (a) A construction permit shall be automatically forfeited if the station is not ready for operation within the time specified therein or within such further time as the Commission may have allowed for completion, and a notation of the forfeiture of any construction permit under this provision will be placed in the records of the Commission as of the expiration date. (b) Any application for extension of time within which to construct a station shall be filed at least 30 days prior to the expiration date of such permit if the facts supporting such application for extension are known to the applicant in time to permit such filing. In other cases such applications will be accepted upon a showing satisfactory to the Commission of sufficient reasons for filing within less than 30 days prior to the expiration date. Such applications will be granted upon a specific and detailed showing that the failure to complete was due to causes not under the control of the grantee, or upon a specific and detailed showing of other matters sufficient to justify the extension. (c) If a construction permit has been allowed to expire for any reason, application may be made for a new permit on FCC Form 321 "Application for a Construction Permit to Replace Expired Permit".



3.816 Equipment tests. (a) During the period of construction for a nonprofit educational AM broadcast station the permittee is authorized to test the equipment in order to provide coverage of the campus with a minimum of radiation. (b) The Commission may notify the permittee to conduct no tests or may cancel, suspend, or change the date of beginning for the period of such tests as and when such action may appear to be in the public interest, convenience and necessity.

3.817 Program tests. (a) When construction has been completed and after application for station license has been filed with the Commission, the permittee is authorized to conduct program tests for a period of not to exceed 30 days. (b) The Commission may notify the permittee to conduct no tests or may cancel, suspend, or change the date of beginning for the period of such tests as and when such action may appear to be in the public interest, convenience and necessity. (c) The authorization for tests embodied in this section or section 3.816 shall not be construed as constituting a license to operate but as a necessary part of the construction.

3.818 Normal license period. All nonprofit educational AM broadcast station licenses will be issued for a normal license period of 3 years. Licenses will be issued to expire at the hour of 3 a.m., eastern standard time, in accordance with the schedule given in section 3.34.

3.819 License, simultaneous modification and renewal. When an application is granted by the Commission necessitating the issuance of a modified license less than 60 days prior to the expiration date of the license sought to be modified, and an application for renewal of said license is granted subsequent or prior thereto (but within 30 days of expiration of the present license) the modified license as well as the renewal license shall be issued to conform to the combined action of the Commission.

3.820 Renewal of license. (a) Unless otherwise directed by the Commission, each application for renewal of license shall be filed at least 60 days prior to the expiration date of the license sought to be renewed. (b) Whenever the Commission regards an application for renewal of license as essential to the proper conduct of a hearing or investigation, and specifically directs that it be filed by a certain date, such application shall be filed within the time thus specified. If the licensee fails to file such application within the prescribed time, the hearing or investigation shall proceed as if such renewal application had been received.

3.821 Temporary extension of station licenses. Where there is pending before the Commission any application, investigation, or proceeding which, after hearing, might lead to or make necessary the modification of, revocation of, or the refusal to renew an existing



nonprofit educational AM license, the Commission may, in its discretion, grant a temporary extension of such license: Provided, however, That no temporary extension shall be construed as a finding by the Commission that the operation of any radio station thereunder will serve public interest, convenience, and necessity beyond the express terms of such temporary extension of license: And provided further, That such temporary extension of license will in no wise affect or limit the action of the Commission with respect to any pending application or proceeding.

3.822 Repetitious applications. (a) Where an applicant has been afforded an opportunity to be heard with respect to a particular application for a new nonprofit educational AM broadcast station, or for change of existing service or facilities, and the Commission has, after hearing or default, denied the application or dismissed it with prejudice, the Commission will not consider another application for a station of the same class to serve in while or in part the same area, by the same applicant or by his successor or assignee, or on behalf of or for the benefit of the original parties in interest, until after the lapse of 12 months from the effective date of the Commission's order. (b) Where an appeal has been taken from the action of the Commission in denying a particular application, another application for the same class of broadcast station, and for the same area, in whole or in part, filed by the same applicant or by his successor or assignee, or on behalf or for the benefit of the original parties in interest, will not be considered until after the final disposition of such appeal.

3.823 Assignment or transfer of control. Application for consent to assignment of a nonprofit educational AM broadcast station construction permit or license or for consent to voluntary transfer of control of a corporation holding a nonprofit educational AM construction permit or license shall be filed with the Commission on Form FCC No. 314 (assignment of license) and Form FCC No. 315 (transfer of control) at least 60 days prior to the contemplated effective date of assignment or transfer of control.

#### RULES RELATING TO LICENSING POLICIES

3.831 Exclusive affiliation of station. No license shall be granted to a nonprofit educational AM broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization under which the station is prevented or hindered from, or penalized for, broadcasting the programs of any other network organization.

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3.832. **Territorial exclusivity.** No license shall be granted to a nonprofit educational AM broadcast station having any contract, arrangement, understanding, express or implied, with a network organization which prevents or hinders another broadcast station serving substantially the same area from broadcasting the network's programs not taken by the former station, or which prevents or hinders another broadcast station serving a substantially different area from broadcasting any program of the network organization. This regulation shall not be construed to prohibit any contract, arrangement, or understanding between a station and a network organization pursuant to which the station is granted the first call in its primary service area upon the programs of the network organization.

3.833 **Terms of affiliation.** No license shall be granted to a non-profit educational AM broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which provides, by original terms, provisions for renewal, or otherwise for the affiliation of the station with the network organization for a period longer than 2 years: Provided, That a contract, arrangement, or understanding for a period up to 2 years, may be entered into within 6 months prior to the commencement of such period.

3.834 **Right to reject programs.** No license shall be granted to a nonprofit educational AM broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which (a), with respect to programs offered pursuant to an affiliation contract, prevents or hinders the station from rejecting or refusing any programs which the station reasonably believes to be unsatisfactory or unsuitable; or which (b), with respect to network programs so offered or already contracted for, prevents the station from rejecting or refusing any program which, in its opinion, is contrary to the public interest, or from substituting a program of outstanding local or national importance.

3.835 **Nonprofit network.** No license shall be granted to a nonprofit educational AM broadcast station having any commercial contract with a network organization unless such network organization is incorporated on a nonprofit basis.

3.836 **Coverage area.** No license shall be granted to a nonprofit educational AM broadcast station which makes any public claims of covering more area than that which is owned or used by the institution of higher learning where it is operating.



## RULES RELATING TO EQUIPMENT

3.851 Transmitter power. The standard power rating of any transmitter of a nonprofit educational AM broadcast station shall be determined by the method of section 3.865.

3.852 Frequency control. The licensee of each nonprofit educational AM broadcast station shall equip each transmitter with an approved low temperature coefficient crystal.

3.853 Modulation monitor. The licensee of each nonprofit educational AM broadcast station shall provide at each program level control position a percentage modulation indicator or a calibrated program level meter from which a satisfactory indication of the percentage of modulation can be determined.

3.854 Transmitter performance. The transmitters proper and associated transmitting equipment of each nonprofit educational AM broadcast station, although not required to meet all requirements of the Standards of Good Engineering Practice Concerning Standard Broadcast Stations, shall be constructed with safety features in accordance with the specifications of article 810 of the current National Electrical Code as approved by the American Standards Association and shall be so operated, tuned, and adjusted that emissions are not radiated outside the authorized band which cause or which are capable of causing interference to the communications of other stations. The audio distortion, audio frequency range, carrier hum, noise level, and other essential phases of the operation which control the external effects, shall at all times be capable of providing satisfactory broadcast service. Studio equipment properly covered by an underwriter's certificate will be considered as satisfying safety requirements.

3.855 Field intensity. The field intensity shall not exceed 150 uv/m at any point 157,000/f. (kc) feet from the edge of the property owned or used by the institution of higher learning and from any of the conductors comprising the radio-frequency distribution system. In any case the carrier transmission shall not cause interference outside the service area of the station.

3.856 Supplementary transmitters and synchronous amplifiers. (a) The licensee of a nonprofit educational AM broadcast station may use supplementary transmitters and synchronous amplifiers providing they meet the requirements of section 3.854.

3.857 Changes in equipment and coupling system. Licensees of nonprofit educational AM broadcast stations shall observe the following provisions with regard to changes in equipment and coupling system: (a) No changes in equipment shall be made: (1) That would result in the emission of signals outside of the authorized channel. (2) That would result in the external performance of the transmitter being in disagreement with section 3.854. (b) Other changes may be made at any time without the authority of the Commission, provided that the Commission shall be promptly notified thereof and such changes shall be shown in the next application for renewal of license.

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## RULES RELATING TO TECHNICAL OPERATION

3.861 Operating schedule. Nonprofit educational AM broadcast stations are not required to operate on a regular schedule and no minimum number of hours of operation is specified; but the hours of actual operation during a license period may be taken into consideration in considering the renewal of nonprofit educational AM broadcast station licenses.

3.862 Experimental operation. The licensee of a nonprofit educational AM broadcast station may, for the purpose of testing and maintaining apparatus, operate on its assigned frequency at any time without specific authorization from the Commission.

3.863 Station inspection. The licensee of any nonprofit educational AM broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

3.864 Station license, posting of The original of each station license shall be posted in the main control room.

3.865 Transmitter power, determination of. The power of each transmitter and synchronous amplifier shall be determined during installation by indirect measurement from the plate input power of the last radio stage and is the product of the plate voltage ( $E_p$ ), the total plate current of the last radio stage ( $I_p$ ), and the proper factor ( $F$ ) given below.

(A) Factor to be used for transmitters employing plate modulation in the last radio stage:	.70
(B) Factor to be used for transmitters employing low level modulation; Class B final stage:	.35
Class BC final stage:	.65
(C) Factor to be used for transmitters employing grid modulation in the last radio stage:	.30

3.866 Modulation. The operating percentage of modulation shall be maintained as high as possible consistent with good quality of transmission and good broadcast practice and in no case less than 85 percent on peaks of frequent recurrence during any selection which normally is transmitted at the highest level of the program under consideration.

3.867 Frequency tolerance. The operating frequency of each nonprofit educational AM broadcast station shall be maintained within 50 cycles of the assigned frequency.

3.868 Discontinuance of operation. The licensee of each station shall notify the engineer in charge of the district where such station is located of permanent discontinuance of operation within two days after operation is discontinued. The licensee, shall in addition, immediately forward the station license to the Washington, D. C. office of the Commission for cancellation.



## OTHER RULES RELATING TO OPERATION

3.881 Logs. The licensee of each nonprofit educational AM broadcast station shall maintain program and operating logs and shall require entries to be made as follows:

## (a) In the program log:

- (1) An entry of the time each station identification announcement (call letters and location) is made.
- (2) An entry briefly describing each program broadcast, such as "music", "drama", "speech", etc., together with the name or title thereof, and the sponsor's name, with the time of the beginning and ending of the complete program. If a mechanical record is used, the entry shall show the exact nature thereof, such as "record", "transcription", etc., and the time it is announced as a mechanical record. If a speech is made by a political candidate, the name and political affiliations of such speaker shall be entered.
- (3) An entry showing that each sponsored program broadcast has been announced as sponsored, paid for, or furnished by the sponsor.
- (4) An entry showing, for each program of network origin, the name of the network originating the program.

(b) In the operating log:

- (1) An entry of the time the station begins to supply power to the transmission system, and the time it stops.
- (2) An entry of the time the program begins and ends.
- (3) An entry of each interruption to the carrier wave, its cause, and duration.
- (4) A log must be kept of all experimental operation. If the entries required above are not applicable thereto, then the entries shall be made so as to fully describe the operation.

3.882 Logs, retention of. Logs of nonprofit educational AM broadcast stations shall be retained by the licensee for a period of 2 years, except when required to be retained for a longer period in accordance with the provisions of section 2.54.

3.883 Logs, by whom kept. Each log shall be kept by the person or persons competent to do so, having actual knowledge of the facts required, who shall sign the log when starting duty and again when going off duty. The logs shall be made available upon request by an authorized representative of the Commission.

3.884 Log form. The log shall be kept in an orderly manner, in suitable form, and in such detail that the data required for the particular class of station concerned are readily available. Key letters or abbreviations may be used if proper meaning or explanation is contained elsewhere in the log.

3.885 Correction of logs. No log or portion thereof shall be erased, obliterated, or willfully destroyed within the period of retention provided by the rules. Any necessary correction may be made only by the person originating the entry who shall strike out the erroneous portion, initial the correction made, and indicate the date of correction.



3.886 Rough logs. Rough logs may be transcribed into condensed form, but in such case the original log or memoranda and all portions thereof shall be preserved and made a part of the complete log.

3.887 Station identification. (a) A licensee of a nonprofit educational AM broadcast station shall make station identification announcement (call letters and location) at the beginning and ending of each time of operation and during operation (1) on the hour and (2) either on the half hour or at the quarter hour following the hour and at the quarter hour preceding the next hour:

Provided,

(b) Such identification announcement need not be made on the hour when to make such announcement would interrupt a single consecutive speech, play, religious service, symphony concert, or operatic production of longer duration than 30 minutes. In such cases the identification announcement shall be made at the beginning of the program, at the first interruption of the entertainment continuity, and at the conclusion of the program.

(c) Such identification announcement need not be made on the half hour or quarter hours when to make such announcement would interrupt a single consecutive speech, play, religious service, symphony concert, or operatic production. In such cases an identification announcement shall be made at the first interruption of the entertainment continuity and at the conclusion of the program: Provided, That an announcement within 5 minutes of the times specified in subdivision (2) of paragraph (a) of this section will satisfy the requirements of identification announcements.

(d) In the case of variety show programs, baseball game programs or similar programs of longer duration than 30 minutes, the identification announcement shall be made within 5 minutes of the hour and of the times specified in subdivision (2) of paragraph (a) of this section.

(e) In the case of all other programs, the identification announcement shall be made within 2 minutes of the hour and the times specified in subdivision (2) of paragraph (a) of this section.

(f) In making the identification announcement the call letters shall be given only on the channel of the station identified thereby.

3.888 Mechanical records. Each program broadcast which consists in whole or in part of one or more mechanical reproductions shall be announced in the manner and to the extent set out below.

(a) Each such program of longer duration than 30 minutes, consisting in whole or in part of one or more mechanical reproductions, shall be identified by appropriate announcement at the beginning of the program, at each 30-minute interval and at the conclusion of the program: Provided, however, That the identifying announcement at each 30-minute interval is not required in case of a mechanical reproduction consisting of a continuous uninterrupted speech, play, religious service, symphony concert, or operatic production of longer than 30 minutes.



(b) Each such program of a longer duration than 5 minutes and not in excess of 30 minutes consisting in whole or in part of one or more mechanical reproductions, shall be identified by an appropriate announcement at the beginning and end of the program.

(c) Each such program of 5 minutes or less, consisting in whole or in part of mechanical reproductions, shall be identified by appropriate announcement immediately preceding the use thereof; Provided, however, That each such program of one minute or less need not be announced as such.

(d) In case a mechanical reproduction is used for background music, sound effects, station identification, program identification (theme music of short duration) or identification of the sponsorship of the program proper, no announcement of the mechanical reproduction is required.

(e) The exact form of identifying announcement is not prescribed, but the language shall be clear and in terms commonly used and understood. A licensee shall not attempt affirmatively to create the impression that any program being broadcast by mechanical reproduction consists of live talent.

3.889 Sponsored programs, announcement of. (a) In the case of each program for the broadcasting of which money, services, or other valuable consideration is either directly or indirectly paid or promised to, or charged or received by, any radio broadcast station, the station broadcasting such program shall make, or cause to be made, an appropriate announcement that the program is sponsored, paid for, or furnished, either in whole or in part. (b) In the case of any political program or any program involving the discussion of public controversial issues for which any records, transcriptions, talent, scripts, or other material or services of any kind are furnished, either directly or indirectly, to a station as an inducement to the broadcasting of such program, an announcement shall be made both at the beginning and conclusion of such program on which such material or services are used that such records, transcriptions, talent, scripts, or other material or services have been furnished to such station in connection with the broadcasting of such program: Provided, however, That only one such announcement need be made in the case of any such program of 5 minutes' duration or less, which announcement may be made either at the beginning or the conclusion of the program.

(c) The announcement required by this section shall fully and fairly disclose the true identify of the person or persons by whom or in whose behalf such payment is made or promised, or from whom or in whose behalf such services or other valuable consideration is received, or by whom the material or services referred to in subsection (b) hereof are furnished. Where an agent or other person contracts or otherwise makes arrangements with a station on behalf of another, and such fact is known to the station, the announcement shall disclose the identity of the person or persons in whose behalf such agent is acting instead of the name of such agent.

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(d) In the case of any program, other than a program advertising commercial products or services, which is sponsored, paid for or furnished, either in whole or in part, or for which material or services referred to in subsection (b) hereof are furnished, by a corporation, committee, association or other unincorporated group, the announcement required by this section shall disclose the name of such corporation, committee, association or other unincorporated group. In each case the station shall require that a list of the chief executive officers or members of the executive committee or of the board of directors of the corporation, committee, association, or other unincorporated group shall be made available for public inspection at one of the radio stations carrying the program.

(e) In the case of programs advertising commercial products or services, an announcement stating the sponsor's corporate or trade name or the name of the sponsor's product, shall be deemed sufficient for the purposes of this section and only one such announcement need be made at any time during the course of the program.

3.890 Broadcasts by candidates for public office. (a) Definitions. A "legally qualified candidate" means any person who has publicly announced that he is a candidate for nomination by a convention of a political party or for nomination or election in a primary, special, or general election, municipal, county, state or national, and who meets the qualifications prescribed by the applicable laws to hold the office for which he is a candidate, so that he may be voted for by the electorate directly or by means of delegates or electors, and who-- (1) has qualified for a place on the ballot or (2) is eligible under the applicable law to be voted for by sticker, by writing in his name on the ballot, or other method, and (i) has been duly nominated by a political party which is commonly known and regarded as such, or (ii) makes a substantial showing that he is a bona fide candidate for nomination or office, as the case may be.

(b) General requirements. No station licensee is required to permit the use of its facilities by any legally qualified candidate for public office, but if any licensee shall permit any such candidate to use its facilities, it shall afford equal opportunities to all other such candidates for that office to use such facilities: Provided, That such licensee shall have no power of censorship over the material broadcast by any such candidate.

(c) Rates and practices. The rates, if any, charged to such candidates for the same office shall be uniform and shall not be rebated by any means, directly or indirectly; no licensee shall make any discrimination in charges, practices, regulations, facilities, or services for or in connection with the service rendered pursuant to these rules, or make or give any preference to any candidate for public office or subject any such candidate to any prejudice or disadvantage; nor shall any licensee make any contract or other agreement which shall have the effect of permitting any legally qualified candidate for any public office to broadcast to the exclusion of other legally qualified candidates for the same public office.



(d) Records; inspection. Every licensee shall keep and permit public inspection of a complete record of all requests for broadcast time made by or on behalf of candidates for public office, together with an appropriate notation showing the disposition made by the licensee of such requests, and the charges made, if any, if request is granted.

3.891 Rebroadcast. (a) The term "rebroadcast" means reception by radio of the program of a radio station, and the simultaneous or subsequent retransmission of such program by a broadcast station. The broadcasting of a program relayed by a remote pick-up broadcast station or studio transmitter link is not considered a rebroadcast. In case a program is transmitted from its point of origin to a broadcast station entirely by telephone facilities in which a section of such transmission is by radio, the broadcasting of this program is not considered a rebroadcast.

(b) The licensee of a nonprofit educational AM broadcast station may, without further authority of the Commission rebroadcast the program of a United States standard, FM, noncommercial educational, or international broadcast station, provided the Commission is notified of the call letters of each station rebroadcast and the licensee certifies that express authority has been received from the licensee of the station originating the program.

(c) No licensee of a nonprofit educational AM broadcast station shall rebroadcast any commercial program of any United States radio station unless all commercial announcements and commercial references in the continuity are eliminated. No licensee shall rebroadcast the call letters of another station.

SUGGESTED AMENDMENT TO PART 13 OF THE COMMISSION'S RULES GOVERNING  
COMMERCIAL RADIO OPERATORS

13.62 (c) The holder of any class of commercial radio operator license may operate any nonprofit educational AM broadcast station.



## ANALYSIS OF SUGGESTED AMENDMENTS

The amendments suggested in Appendix "D" are offered in response to the Commission's proposal that broadcasting be permitted only in accordance with Part 3 of its Rules as appropriately amended. The suggested amendments anticipate that the college stations will continue to operate in the AM band on a nonprofit but commercial basis under the Commission's Rules Governing Radio Broadcast Services. The justifications for the above are discussed more fully in Appendix "C" Reasons for Continuance of Carrier Current Broadcasting.

The suggested amendment to Part 3 is intended to be similar to the existing Subparts as to content, general form, numbering, and other details.

Sections 3.801 and 3.802 define the terms "Nonprofit Educational AM Broadcast Station" and "Carrier Current" which are used in subsequent paragraphs. Sections 3.803 and 3.804 are adapted from Sections 3.503 and 3.504 of the Rules Governing Noncommercial FM Broadcast Stations. The standards of eligibility remain similar in Section 3.803. Section 3.804 is modified to agree with the present Technical Code of the Intercollegiate Broadcasting System in order to prevent interference with standard AM stations. The channel, in accordance with existing practice, is to be chosen by the station.

Sections 3.811 to 3.823, with the exception of Section 3.818 which is taken from the standard AM section, are adaptations from the Rules Governing Noncommercial FM Broadcast Stations and are necessary



for the rules to be complete in scope. Similarly, Sections 3.831 - 3.834 are adaptations from the Rules Governing Standard AM Broadcast Stations.

In all instances, operation is limited to a nonprofit basis. This is in accordance with the educational policy of most institutions which have campus stations and should eliminate the possibility of over-commercialization of this special type of service. With this in view, Sections 3.835 and 3.836 are considered appropriate.

Section 3.851 sets forth a recommended method of determining radio-frequency power in order to provide standardization. Section 3.852 requires an approved low temperature coefficient crystal in order to maintain stability and to prevent interference. Since these installations will be operated by college technical personnel and to avoid innumerable frequency checks, stable frequency control is necessary. Section 3.853 provides that a modulation indicator shall be provided for each station. This is similar to Section 3.553b of the Rules which were established for low power educational FM stations.

In determining the permissible field intensity for campus radio stations (Section 3.855), it is essential that the value be sufficient to permit adequate service of the campus coverage areas, and, at the same time, not result in objectionable interference. The minimum value prescribed in the Commission's Standards of Good Engineering Practice for primary service to residential areas is 2000 uv/m. The value of 15 uv/meter at a distance of  $\frac{\lambda}{2\pi}$  at present prescribed in Part 15



of the Rules was not intended for campus broadcast stations. The figure was not obtained empirically. The Intercollegiate Broadcasting System, before arriving at any figure, conducted a survey of many of the existing stations and obtained data which in general showed the following facts: (1) at an installation where all ac and rf distribution wiring was underground, the signal level outside of a serviced building was below 15uv at 100 feet; (2) at an installation having overhead ac wiring (ac service on poles) and partial overhead rf lines, radiation from the ac lines was approximately 125 uv/meter at a distance of  $\frac{\lambda}{2\pi}$  with 0.2 watts being fed to the ac lines. With slightly greater powers fed to the ac lines greater field strengths were noted but in no observed case was there a field intensity substantially greater than 150 uv/meter at a distance of  $\frac{\lambda}{2\pi}$  from the edge of the college campus where the carrier system was well engineered.

It is to be noted that comments filed in this docket by a prominent manufacturer propose that a value of 200 uv/m at a distance of 100 feet be permitted for restricted radiation devices. This manufacturer also indicated that radiation from local oscillators of broadcast receivers often exceed the value proposed by the Commission.

Since the beginning of campus radio thirteen years ago, interference caused standard broadcast stations has been negligible. In view of the foregoing, it is believed that 150 uv/m is not excessive. Many campus stations would not be able to provide satisfactory coverage with lower values of field, whereas higher field intensities would

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likely cause interference and experience has shown that stations operating at such values are not designed in accordance with the best known engineering practices. A field intensity of 150 uv/m will permit the stations to operate and to provide adequate coverage of college campuses without interfering with standard broadcast stations, provided also that the proper frequency is chosen in accordance with Section 3.804.

The engineering standards for supplementary transmitters or synchronous amplifiers as set forth in Section 3.856 are necessary since in many installations these units are required for adequate coverage of large institutions or colleges with separate campuses.

Section 3.857 has been written with the idea in view that changes in equipment may result in excessive radiations. Accordingly, the Commission should be notified of such changes.

Sections 3.861 to 3.891 have been adapted from the rules governing standard broadcast stations with some minor changes which are considered to be applicable for a suitable set of rules for this service.

Section 13.62(c) governing radio operators' licenses has been proposed in order that qualified engineering responsibility in the form of licensed operators be required for campus radio stations. At most technical schools and large universities holders of first or second class commercial radio operators' licenses are generally available. At liberal arts and women's colleges, however, this is often not the case. This section provides that the holder of a restricted operator's permit would also be authorized to operate a campus station.



Feb 18 1949

Herbert B  
Barlow

handwritten

28 Feb

1949

Mr Ted  
Conant

Dear Sir

In my  
letter to  
Herb Barlow



FEDERAL COMMUNICATIONS COMMISSION  
Washington 25, D. C.

Report No. 1295

TELEPHONE AND TELEGRAPH ACTIONS

PUBLIC NOTICE

35021

April 13, 1949

The Commission en banc, by Commissioners Coy, Walker, Hyde and Henneck today took the following action:

TO CLARIFY RULES GOVLRNING USE OF LOW POWER RADIO DEVICES

The Commission proposed certain amendments to Part 15 of its Rules Governing Restricted Radiation Devices in an attempt to provide for operation of low power devices without the likelihood of objectionable interference to established radio services and, at the same time, obtain information concerning the nature of devices presently being operated.

Its present rules cover many types of operation. Among these are low power "broadcasting", notably by college campus carrier systems, phono-oscillator operation, control of doors, model aircraft, lights, electrical equipment, etc.; use in stage prompting, coaching, church and school activities, transmission of music throughout industrial plants and other buildings, warning devices, power line maintenance, intercommunication at mines, oil fields and large construction projects traffic control at railway marshalling yards, remote control of public address systems, plant guard systems, and in connection with spraying, pollinating and other agricultural application.

The Commission contemplates recognizing two categories of such devices -- Incidental Radiation Devices and Restricted Radiation Devices. Illustrative of the former are laboratory signal generators, beat frequency audio oscillators and radio receiver oscillators. Restricted radiation devices would include wireless record players, carrier current communication systems and remote control devices using radio.

It is also proposed that no "low power broadcasting" be permitted on any frequency other than in the band 535-1605 kc, and then only in accordance with the Commission's Rules Governing Broadcast Services, as appropriately amended. Use of the radio spectrum by Restricted Radiation Devices will be subject to certain provisions.

Comment by interested parties will be received up to and including June 1.

\* \* \* \* \*

This is a full excerpt from Report No. 1295 pertaining to Low Power Radio Devices.

COPY



~ ~ F Y

FEDERAL COMMUNICATIONS COMMISSION  
Washington 25, D. C.

FCC 49-459  
32939

In the Matter of )  
Amendment of Part 15 of the )  
Commission's Rules Governing )  
Restricted Radiation Devices )

DOCKET NO. 9288

NOTICE OF PROPOSED RULE MAKING

1. Notice is hereby given of proposed rule making in the above entitled matter.

2. The Commission's Rules Governing Restricted Radiation Devices, Sections 15.101-15.104 of the Rules and Regulations, provide in substance that any apparatus generating a radio frequency electromagnetic field not exceeding 15 microvolts per meter at a distance of  $\lambda/2$  (157,000 feet divided by the frequency of operation in kilocycles; i.e., 98 to 285 feet from the point or line radiator in the standard broadcast band) is not subject to the other Rules of the Commission, provided that no objectionable interference to the reception of authorized radio signals results. In accordance with these Rules many types of unlicensed operation are presently being carried on. Among these are: low power "broadcasting," notably by college campus carrier systems, phono-oscillator operation, control of doors, model aircraft, lights, electrical equipment, etc., use in stage prompting, coaching church and school activities, transmission of music throughout industrial plants and other buildings, warning devices, power line maintenance, intercommunication at mines, oil fields and large construction projects, traffic control at railway marshaling yards, remote control of public address systems, plant guard systems, and in connection with spraying, pollinating and other agricultural application. Low power radiation may also exist as an unwanted result of receiver oscillation, and from other causes.

3. It will be noted that the proposed amendments of Part 15 of the Commission Rules may involve subsequent amendments of Part 3 (Broadcast) and Part 18 (Industrial, Scientific and Medical) of the Commission's Rules, to include certain types of operation presently carried on under the existing Part 15.

4. The Commission is especially desirous of obtaining information concerning the nature of devices presently being operated under Part 15 of the Rules, as well as obtaining views regarding revision of the rules as proposed in this proceeding. The proposed amendments contained in the attached Appendix, accordingly, set forth only the broad administrative and engineering factors to be considered by the Commission in its proposed changes in the present rules. Under these circumstances the receipt of views and comments filed in connection with this proceeding may provide a basis for certain changes and enlargements in the text of the Appendix as it now appears.

5. This notice is issued pursuant to the provisions of Sections 301 and 303 (a), (b), (c), (e), (f), (g), (n) and (r) of the Communications Act of 1934, as amended.

6. Any interested person may file with the Commission on or before June 1, 1949, a statement or brief setting forth his comments in regard to the proposed amendments of the Commission's rules. The Commission will consider all such comment before taking action in the matter, and if any comments are submitted which appear to warrant the holding of a hearing or oral argument, notice of the time and place of such hearing or oral argument will be given.

7. In accordance with the provisions of Section 1.764 of the Commission's rules, an original and 14 copies of all statements, briefs or comments filed shall be furnished to the Commission.

FEDERAL COMMUNICATIONS COMMISSION

Adopted: April 13, 1949  
Released: April 13, 1949

T. J. Slowie  
Secretary

Attachment

C O P Y



C O P Y  
A P P E N D I X

1. In recognition of its continuing responsibility under Section 301 of the Communications Act of 1934, as amended, to promulgate rules and technical standards aimed at the suppression of radio energy which, regardless of source, is an actual or potential source of interference to authorized radio signals in interstate commerce, the following are approaches which will be considered by the Commission in drafting and adopting formal rules and standards for those radio frequency devices which are not at present specifically governed by any part of the Commission's Rules and Regulations except in so far as the provisions of the existing Part 15 of the Rules may be applicable 1/.

2. In the proposed adoption of such rules and standards, the mentioned radio frequency devices will be divided into two categories:

(a) Incidental Radiation Devices. Devices which radiate energy substantially from a point source which radiations are incidental to the work to be accomplished, and which devices do not require the use of associated receivers. An exception shall be made in the case of laboratory test equipment using associated receivers.

(b) Restricted Radiation Devices. All other devices which radiate energy and are not covered by the definition of Incidental Radiation Devices or are not otherwise specifically covered in the Rules and Regulations of the Commission.

3. Illustrative of some Incidental Radiation Devices are laboratory signal generators, beat frequency audio oscillators and radio receiver oscillators. The Commission will consider the desirability of including regulations governing Incidental Radiation Devices within the provisions of Part 18 of the Commission's Rules and Regulations Relating to Industrial, Scientific and Medical Service as appropriately amended, or of including the provisions regulating such devices under a separate rule. Since the primary consideration involved in the regulation of the use of this type of apparatus is the actual or potential interference to other services, the Commission will consider and promulgate rules under which such devices may be permitted to operate without registration or licensing requirements, subject however, to one or both of the following radiation limitations:

(a) Limit the field to fixed value at a fixed distance from the radiating element, e.g. 15 uv/m at 100 feet; and/or

(b) Limit the field to values which vary with frequency because of practical limitations upon suppression which can be obtained, e.g. 15 uv/m at a distance of lambda over two pi or 157,000/frequency in kilocycles feet.

4. Illustrative of some Restricted Radiation Devices, as defined in paragraph 2 (b) above, are wireless record players, carrier current communications systems, and remote control devices using radio. Since Restricted Radiation Devices will, by definition, be used for the accomplishment of some specific purpose, and since the use of such devices will be a potential source of harmful interference to recognized radio services, it will be necessary that some system of regulation be adopted. Such regulation may take the form of certification, type approval, registration and/or licensing, whichever appears to be the most practicable for any given type of operation. It is also proposed that no "low power broadcasting" be permitted on any frequency other than in the band 535-1605 kc, and then only in accordance with the Commission's Rules Governing Broadcast Services, as appropriately amended. Use of the radio spectrum by Restricted Radiation Devices will be subject to the provisions indicated:

1/ Persons operating Restricted Radiation Devices or Incidental Radiation Devices in accordance with the proposed rules shall not be deemed to have any vested or recognizable right to the continued use of any given frequency, by virtue of prior registration or certification of equipment thereunder. Such operation will be subject to the condition that no harmful interference will be caused to any radio service or station and will be subject to such mutual interference as may be caused by other Restricted Radiation or Incidental Radiation Devices, or from any authorized source.



C O P Y

(a) 10-200 kc

i. Carrier current systems operating in this band will be limited to radiation of 15 uv/m at a distance of lambda over two pi feet computed from the line radiator.

ii. Restricted Radiation Devices not employing carrier current techniques will not be permitted on these frequencies.

(b) 200-535 kc.

i. No Restricted Radiation Devices will be permitted on these frequencies.

(c) 535-1605 kc.

i. Because of the social impact of broadcasting upon the general public and the responsibilities of the Commission in regard to the regulation of broadcasting; and

ii. Because of the probability of interference being caused to reception in the standard broadcast services by the operation of devices in this band in view of the number of broadcast receivers and transmitters now in operation:

A. Broadcasting on these frequencies will only be permitted in compliance with such rules and limitations covering eligibility, licensing, technical standards and other subjects as may now be found in the Commission's Rules Governing the Standard Broadcast Services, or as they may hereafter be amended;

B. Because of the present number of wireless record players in operation and their necessity for using standard broadcast receivers, such devices will be permitted to operate on those frequencies subject to the following provisions:

I. Power input to the final radio frequency stage shall not exceed 1 watt

II. The field intensity measured at a distance greater than lambda over two pi feet shall not exceed 15 uv/m as measured from the Restricted Radiation Device or associated apparatus.

III. No harmful interference shall be permitted to any radio service.

IV. No broadcasting shall be permitted. ~~←~~

V. After January 1, 1950 compliance with this part, (4(c)iiB), shall be certified by a competent engineer or the wireless record player shall have been type approved by the Commission.

C. No other Restricted Radiation Devices will be permitted to operate in this band.

(d) 1605-27.23 Mc.

i. No Restricted Radiation Devices will be permitted to operate on these frequencies.

(e) 27.23-27.28 Mc.

i. No broadcast services will be permitted on these frequencies.

ii. All Restricted Radiation Devices not used for broadcasting purposes will be permitted subject to the following provisions:

A. Power input to the final radio frequency stage shall not exceed 0.1 watts.

B. The field intensity measured at a distance greater than 100 feet shall not exceed 15 uv/m, as measured from the Restricted Radiation Device or associated apparatus.

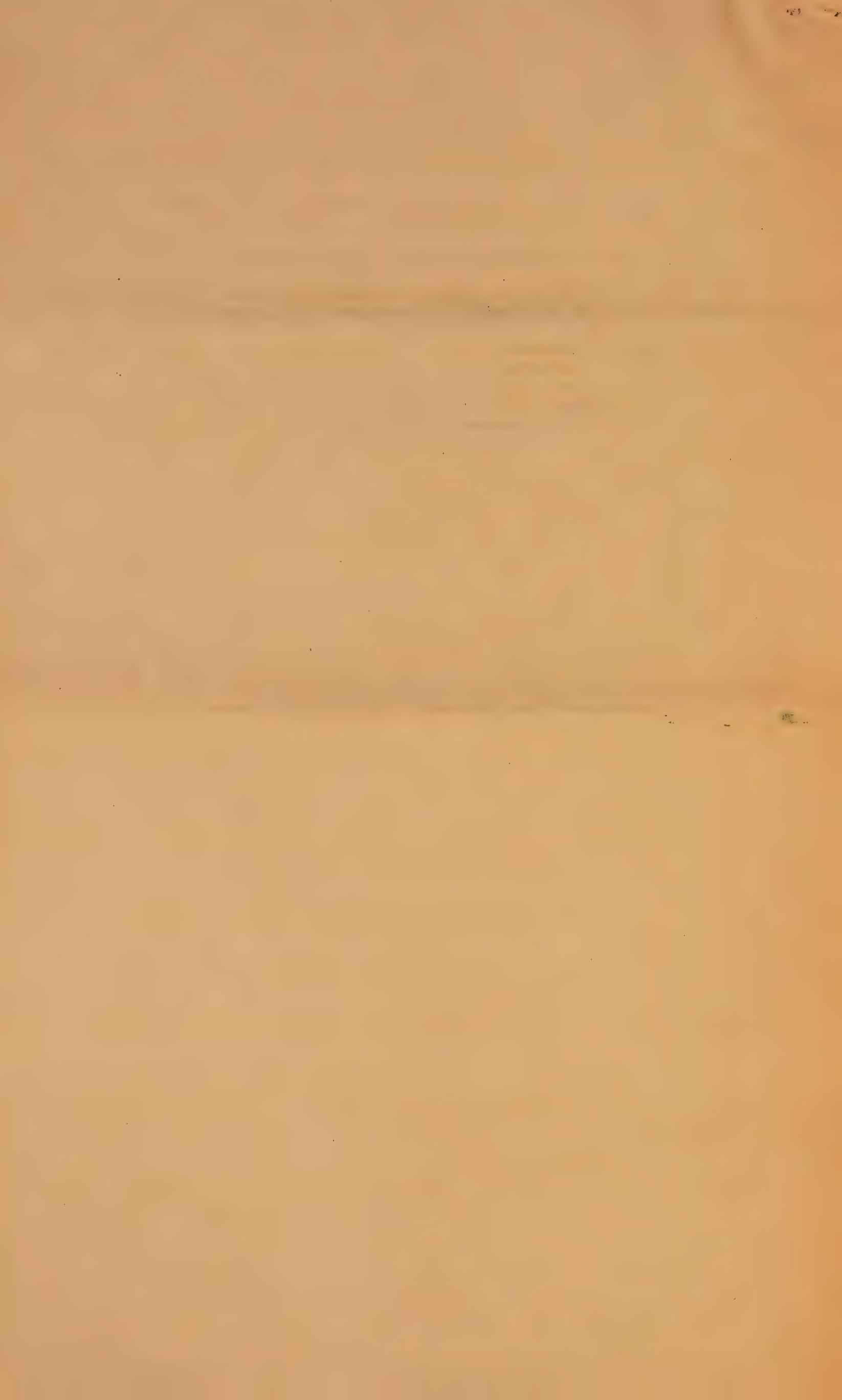
C. No harmful interference shall be permitted to any other radio service operating on other frequency band.

D. After January 1, 1950, compliance with this part, (4 (3) (ii)), shall be certified by a competent engineer or the device shall have been type approved by the Commission.

iii. The Commission has under consideration the use of these frequencies and similar devices with power in excess of that hereabove set forth subject to eligibility requirements, licensing requirements and technical standards to be hereafter determined and to be incorporated in such rules and services as the Commission shall deem advisable.

(f) 27.28 Mc and above.

i. No Restricted Radiation Devices or broadcast devices except as otherwise provided by the Commission's rules will be permitted on those frequencies.



INTERCOLLEGiate BROADCASTING SYSTEM  
Washington Office

April 15, 1949 2808 Erie Street, S. E.  
Washington 20, D. C.

To: Member and Trial Stations, Regional Representatives, Board of Directors, System Staff, Faculty Advisers.

Subj: Course of Action for IBS Stations Regarding FCC's Proposed Rules Governing Low Power Broadcasting.

Ref: (a) FCC Public Notice 35021 of April 13, 1949.  
(b) FCC Notice of Proposed Rule Making, Docket 9288 of April 13, 1949.  
(c) Suggested Outline for Briefs and Comments by Campus Stations in Reply to Ref.(b), FCC Docket 9288.  
(d) IBS Engineering Note 18.

The Problem:

On April 13, the FCC issued a public notice, Ref.(a), and a notice of proposed rule making, Ref. (b), which concern all campus radio stations. Briefly this action proposes to take campus broadcasting out of Part 15 of the FCC Rules which covers low power devices and place it under Part 3 of the Rules which governs standard broadcast services.

As none of our campus stations are designed to comply with the present rigid rules which govern standard broadcast services, such action, if not responded to, will effectively result in closing down all campus stations unless the broadcasting rules are appropriately amended or some other provision is made. The FCC has invited comment from all interested parties up to and including June 1, and is desirous of determining the extent of interest in the field of low power broadcasting among the colleges, the radio industry, and others. If a poor showing is made by the campus stations or if there is no response, this will provide justification to close them.

Our problems are to take the necessary steps to insure that the FCC holds hearings on low power broadcasting and to make a sound and unified showing for campus radio. Our task is not merely to muster a large volume of response to the FCC notice but rather to see to it that all comments which are submitted are intelligent and responsible. It is essential that a dignified presentation be made for campus radio demonstrating its educational value as a training ground and the public services it performs for the college community. Campus radio will have a strong case if it can be presented as a mature form of broadcasting whose educational value is recognized by educators, the industry, and the public.

Background:

As a result of our many contacts with the FCC, I can say that on the whole the Commission is not fundamentally opposed to campus radio. But it must be kept in mind, however, that there has been considerable difference of opinion among the members of the FCC staff regarding the application of the low power rules to low power broadcasting. Some of the divergent opinions expressed include:

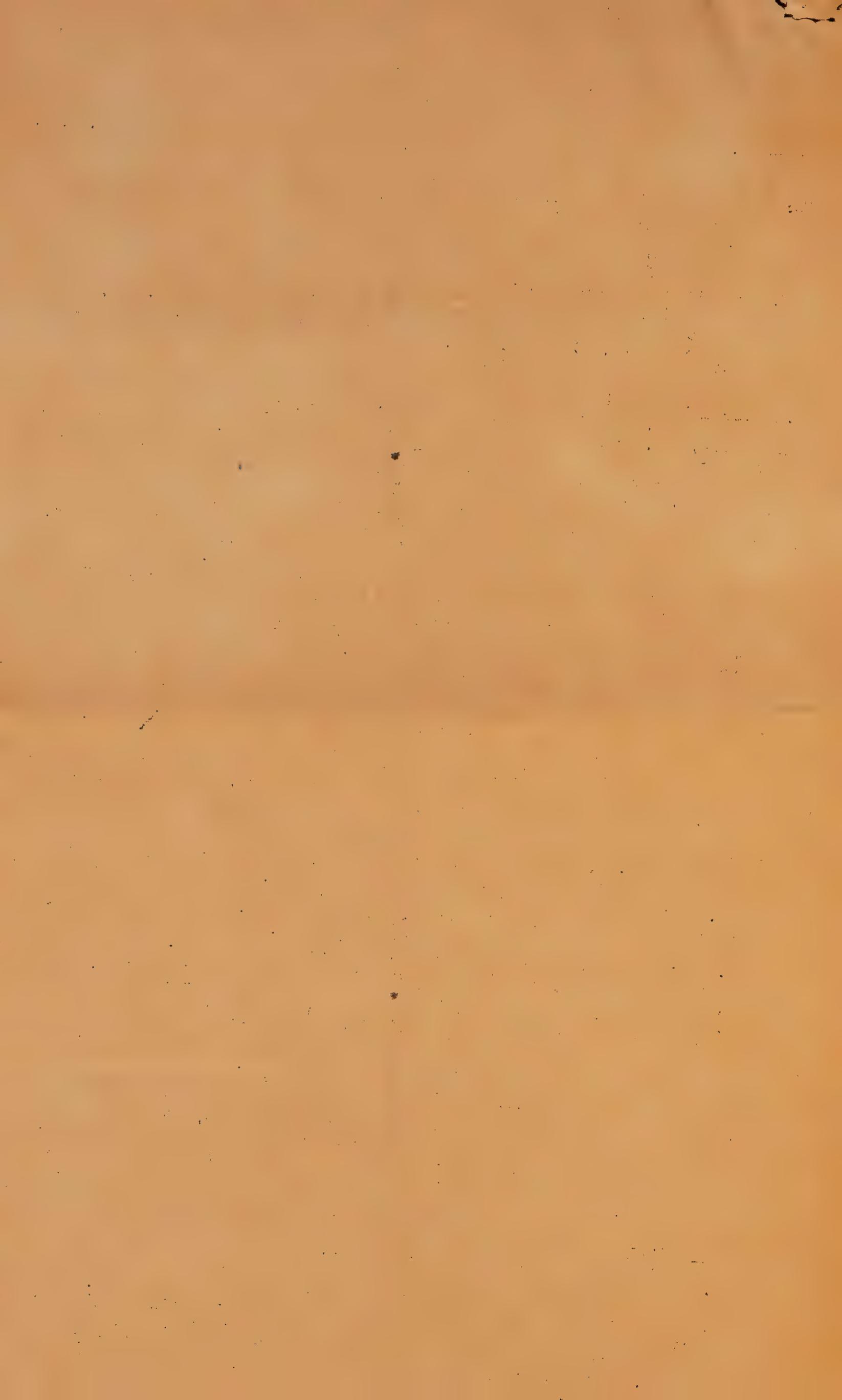
1. Campus stations operate a limited-area broadcast service on the standard broadcast band. Therefore they should come under broadcast rules.
2. As they are low power devices, they should be left under the low power rules.
3. Why shouldn't the campus stations change over to the educational non-commercial FM band which was set up for educational institutions?
4. There is a minority at the Commission that would just as soon put campus stations off the air rather than be bothered by them.

Due to these divergent points of view, the Commission does not wish to be arbitrary or to assume full responsibility for setting up new rules, but rather wishes the decision to take into consideration public opinion and reaction. The present action by the Commission has been taken to allow all interested parties an opportunity to voice an opinion regarding the low power rules. On the basis of the response received the Commission will determine whether or not there is sufficient interest to warrant holding hearings.

Necessary Action by IBS Stations:

There are two things for your station to do in this matter:

1. Take the necessary steps by June 1 to insure that the FCC holds hearings on low power broadcasting. A suggested procedure is outlined below.
2. Submit to IBS by May 12 information regarding the operating requirements of your station including field strength data (if you have not already done so), in order that your needs can be included in the IBS presentation for campus radio. Recommendations regarding desired rules will also be welcomed by IBS before May 12.



In order to insure that the FCC holds hearings the following is suggested. Each IBS station should see to it that the Commission receives on or before June 1 favorable statements, comments or briefs (14 copies) from the following:

- (a) Your college or university. This statement should come from the highest official of your college administration or faculty who is sufficiently informed to make a strong case for the value of your station in the college community and the contribution of campus radio to education.
- (b) Influential friends of your station or college --philanthropic, political, or otherwise, -- who can make a statement concerning the need for campus stations in universities.
- (c) Representatives of commercial stations and the broadcasting industry. Any statements which show that campus stations cooperate with and supplement rather than compete with commercial radio, in addition to serving as a training ground for it, will be most pertinent.
- (d) Your faculty adviser and your station directly. This statement should include relevant points not already covered or sufficiently emphasized by (a), (b), or (c) above.
- (e) Others whose statements you feel would carry weight with the Commission. Each of the briefs should, in addition to presenting arguments in behalf of campus radio, request (a) that specific provision in the FCC Rules be made for campus radio stations, and (b) that hearings be held in order that the stations be given an opportunity to present their case. All of the above persons should be properly indoctrinated concerning the problems involved in order that they submit accurate statements. Such presentations will carry more weight with the Commission than mere endorsements of campus radio. There is no reason why the drafts of much of this material cannot be prepared by your station staffs.

It is most important that campus stations act collectively and not present conflicting opinions. Toward that end a sincere attempt should be made to resolve any opposing points of view, technical or otherwise, that may occur within the System before they are presented to the FCC. To help you in your presentation an outline of topics for consideration is enclosed. Please see to it that all material which is submitted is pertinent, accurate, and well thought out.

Of course, stations which are under construction should also comment to the FCC. It is suggested that in addition to discussing any of the points on the suggested outline that they indicate the reasons why a station is planned for their college community, the service it will perform, and what detrimental effect would result if the FCC took unfavorable action.

Relative to point 2 above, it is important that all stations which have not submitted field strength data do so as soon as possible. The procedure for taking such data is outlined on IBS Engineering Note 18, of which a copy is enclosed. This memo is based upon FCC Monitoring Division procedures which were suggested to IBS by the Engineering Department at the Commission. Data should be submitted whether or not individual stations are operating within the present rules. IBS' engineering recommendations for modification of the rules will be based upon the data submitted. All field strength and technical data on the stations, as well as engineering recommendations and comments regarding the proposed rules, should be sent to Mr. Herbert B. Barlow, IBS Engineering Director, 1725 New Hampshire Avenue, NW, Washington 9, D.C., by May 12.

The Commission has indicated that it will look to IBS to represent the collective needs of campus stations. Towards this end, IBS plans to make a presentation in behalf of the stations in the System, both for June 1 and at any hearings that may be called subsequently. The material included will be based upon the engineering, legal, and social aspects of campus radio as determined by the operating requirements and desires of the member stations.

Campus stations are allowed to exist under the present low power rules so long as they do not cause interference. This has been a negative approach to the problem. The FCC's action in proposing that low power broadcasting come under broadcast rules is a step in the right direction if the broadcast provisions can be sufficiently modified to include the campus stations. Last year the broadcast rules were modified to provide for the low power (less than 10 watt) educational FM. This should serve as a good precedent for the present case.

There may be some opposition to allowing low power broadcasting to continue commercially. IBS will take the stand that campus stations should be authorized to operate on an educational non-profit basis.



It may be well to say something at this point regarding the operation of the FCC. In addition to the Commissioners and the field offices, the Commission consists of a large staff of technical and legal experts as well as an office force. A large portion of the work is done by the staff in terms of studies, investigations, and recommendations. It is upon the latter that the Commissioners make their decisions. When a matter comes up before the Commissioners for decision, a good deal of the leg work has already been done by the staff. In our case the staff will have to go over and consider the response of the stations and others and then make recommendations before the final decision is made by the Commissioners themselves.

The engineering aspects of the proposed rules for low power broadcasting were not included in the FCC notice of April 13. If it is determined that Part 3 of the FCC Rules (on broadcast services) can be modified to include campus stations, the engineering problems will come up for consideration at that time.

If the Commission decides to hold hearings on the basis of the comments received, they should be scheduled some time after July 1 (allowing a month for the FCC to consider the comments submitted). In this way the hearings would come during the summer recess which should permit considerably greater participation by IBS personnel than would be possible during the academic year.

I have tried to explain at some length the background of the present situation. The next step is up to each of you and IBS as a whole. It would be appreciated if you would fill out and return the enclosed questionnaire regarding your station's plans at your earliest convenience.

Sincerely yours,  
*George Abraham*  
George Abraham  
Chairman

Encl: Refs (a), (b), (c), (d), and Questionnaire for Campus Stations re FCC  
Docket No. 9288.



## INTERCOLLEGIATE BROADCASTING SYSTEM

### Suggested Outline of Points to Be Considered in Preparing Briefs and Comments in Reply to the FCC Notice of Proposed Rule Making for Low Power Devices

Here are some points you may wish to consider in preparing a statement for the FCC on campus radio, and in particular on the justification for the continued existence of your station.

1. Educational value of campus stations.
  - (a) Part of radio curriculum in many colleges.
  - (b) Extra-curricular activity in liberal arts colleges.
2. Services by your station to the college community.
3. Listener response. Does your campus station have a better "Hooper Rating" on campus than other standard broadcast stations which serve the area?
4. Interference. The FCC wishes to insure that low power devices not cause interference. From experience with a number of campus installations, IBS has found that if properly engineered a campus station can be designed to cause a minimum of interference off campus. On campus, this is not a problem as the majority of students listen to their station. A statement to the effect that it is felt that campus stations can be designed to cause little or no interference will be in order.
5. Cooperation with standard broadcast stations, such as exchange of programs, joint use of facilities, non-competitive services. Enumerate any arrangements that have been made between the campus station and AM, FM, or TV stations in your area.
6. Campus station as a training ground for the radio industry. Mention the number of students majoring in radio or allied fields at your college and the number that go into radio after graduation. Give examples if appropriate.
7. Programming. What creative programming techniques have been developed by your station? What is the proportion of public service time to sponsored time on your station? What limitations are there on commercials for your station?
8. Investment in the physical plant of the station. Give data on your annual budget.
9. The FCC is understaffed for its present work load. Its appropriations have just been cut by Congress. This means that even less personnel will be available. It is important to show that your station is responsibly managed and supervised and that it can be expected to operate legally with a minimum of regulation.
10. Why haven't you installed a non-commercial FM station in place of the campus station? The FCC will be interested in your answer to this.

#### Suggested recommendations:

- (a) That specific provision in the FCC Rules be made for campus radio stations.
- (b) That hearings be held in order that the stations be given an opportunity to present their case.

Fourteen copies of all statements, briefs, and comments should be filed with the FCC on or before June 1, 1949.

1. *Chlorophytum comosum* (L.) Willd. (Liliaceae)  
Common Name: *Chlorophytum*  
Local Name: *Chlorophytum*  
Habitat: Commonly found in open grassy areas, along roadsides, and in disturbed soil. It is a common species in the region.  
Description: A clump-forming, evergreen perennial. The leaves are long, narrow, and linear, arranged in a dense, fan-like cluster at the base of the plant. The leaf blades are light green, often with a distinct midrib and some minor veins. The leaf sheathes are tightly wrapped around the stem.  
Flowers: The flowers are small, white, and bell-shaped, arranged in a terminal panicle inflorescence. The flowers are fragrant and attract pollinators like bees and butterflies.  
Fruit: The fruit is a small, round, three-lobed capsule that splits open to release seeds. The seeds are small and brownish.  
Leaves: The leaves are long, narrow, and linear, arranged in a dense, fan-like cluster at the base of the plant. The leaf blades are light green, often with a distinct midrib and some minor veins. The leaf sheathes are tightly wrapped around the stem.  
Bark: The stem is smooth and light-colored, with a few small lenticels. The base of the plant is often woody and fibrous.  
Roots: The roots are fibrous and white, extending downwards from the base of the plant.  
Uses: The plant is used as a decorative ground cover in gardens. It is also used as a source of fiber for making ropes and mats. The leaves are sometimes used as a natural fertilizer or mulch.  
Notes: The plant is considered a good indicator of soil health and is often used in reclamation projects. It is a hardy species and can withstand a range of environmental conditions.

# INTERCOLLEGIATE BROADCASTING SYSTEM

## Suggested Outline of Points to be Considered in Preparing Briefs and Comments in Reply to the FCC Notice of Proposed Rule Making for Low Power Devices

Here are some points you may wish to consider in preparing a statement for the FCC on campus radio, and in particular, on the justification for the continued existence of your station.

1. Educational value of campus stations:
  - (a) Part of radio curriculum in many colleges,
  - (b) Extra-curricular activity in liberal arts colleges.
2. Services rendered by your station to the college community.
3. Listener response. Does your campus station have a better "Hooper Rating" on campus than other standard broadcast stations which serve the area?
4. Interference. The FCC wishes to insure that low power devices do not cause interference. From experience with a number of campus installations, IBS has found that if properly engineered a campus station will cause negligible interference off campus. On campus, this is not a problem as the majority of students listen to their station. A statement to the effect that it is felt that campus stations can be designed and operated so as to cause little or no interference will be in order.
5. Cooperation with standard broadcast stations, such as exchange of programs, joint use of facilities, non-competitive services. Enumerate any arrangements that have been made between the campus station and AM, FM, or TV stations in your area.
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7. Programming. What creative programming techniques have been developed by your station? What is the proportion of public service time to sponsored time on your station? What limitations are there on commercials for your station?
8. Investment in the physical plant of the station. Give data on initial investment, also figures on your annual budget for new equipment, operating expenses.
9. The FCC is understaffed for its present work load. Its appropriations have just been cut by Congress. This means that even less personnel will be available. It is important to show that your station is responsibly managed and supervised, and that it can be expected to operate legally with a minimum of regulation and supervision.
10. Why haven't you installed a non-commercial FM station in place of your wired-radio campus station? The FCC will be interested in your answer to this.

### Suggested recommendations for you to make to the FCC:

- (a) That specific provision in the FCC Rules be made for wired-radio campus stations.
- (b) That hearings be held in order that the stations be given an opportunity to present their case.

The original and fourteen copies (15 in all) of all statements, briefs, and comments should be filed with the FCC on or before June 1, 1949.

A format for your brief is found on the reverse side. This issue supersedes earlier issue dated April 15, 1949. Destroy copies of April 15, 1949 issue.

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C.

In the Matter of

Amendment of Part 15 of  
the F.C.C. Rules Governing  
Restricted Radiation Devices

DOCKET NO. 9288

Schenectady, N.Y.  
April 25, 1949

Hon. Commissioners:

Campus wired-radio broadcasting has been in use at Union College since 1941 and has formed a very important part in extra-curricular activity at the college since that time. Our station, WRUC, is on the air eight hours a day providing tailored programs to the student audience and at the same time giving some 75 undergraduates experience in the various aspects of radio broadcasting. It is most interesting to note that the listener response to the programs of WRUC is very high. A survey taken in April 1948 showed, Etc.

At an alumni dinner, January 10, 1947, Mr. Carter Davidson, the President of Union College said:

"College campus radio broadcasting has come a long way since its inception in 1936 at Brown University. Etc."

It is respectfully solicited that an oral hearing be given this matter in order that rules may be promulgated which will allow for the continued operation of campus wired-radio broadcasting stations.

TEXT: DOUBLE-SPACED

QUOTES: SINGLE-SPACED

Respectfully submitted,

Robert C. Hartwell, Manager  
Station WRUC  
Union College

OPTIONAL NOTE: The above text is purely imaginative, and bears no relation to any brief which may be submitted by WRUC, or any statement made by President Carter Davidson. We beg their indulgence for this paper which was prepared for purely illustrative purposes, only.

The Federal Communications Commission has issued a proposal which would place college radio stations under the rules governing standard broadcast stations. This would cause WHRC (of Haverford College) and most all college stations to shut down as unable to meet the stringent technical requirements of commercial stations.

Now, if sufficient concern is shown by college radio and others affected, the FCC may hold hearings on the proposal. Therefore, WHRC, in conjunction with the Intercollegiate Broadcasting System, is requesting that you, because of your connection with the station, write statements, or comments concerning college radio and WHRC and the value of their activities, as seen from your standpoint. The following points may be suggestive:

- (1) Educational value of this extracurricular activity.
- (2) Services to the college community.
- (3) Technical aspect, especially the actuality or feasibility of non-interference and the expectations of legal operation with minimum FCC supervision.
- (4) Cooperation with standard broadcast stations.
- (5) Value as training ground for radio field--statistics on graduates now in field.
- (6) Creative aspect of programming, such as dramatics.

We desire that you recommend that specific provision in the FCC rules be made for campus radio stations, and that hearings be held on the matter. Please address the letter to the Federal Communications Commission, Washington 25, D.C., and send it to WHRC in time for us to have copies made and submitted to the FCC by the deadline of June 1, 1949.

We are extremely grateful for your cooperation in this matter.

collected in the same manner by the same  
method and under the same conditions, to be made to list 304 and  
be put out of use as soon as possible. There will be no bias or error  
in this method of ascertainment, provided that the  
list of registered has been kept up to date at all times.

The Federal Communications Commission has issued a proposal which would place college radio stations under the rules governing standard broadcast stations. This would cause WHRC (of Haverford College) and most all college stations to shut down as unable to meet the stringent technical requirements of commercial stations.

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- (3) Technical aspect, especially the actuality or feasibility of non-interference and the expectations of legal operation with minimum FCC supervision.
- (4) Cooperation with standard broadcast stations.
- (5) Value as training ground or radio field--statistics on graduates now in field.
- (6) Creative aspect of programming, such as dramatics.

We desire that you recommend that specific provision in the FCC rules be made for campus radio stations, and that hearings be held on the matter. Please address the letter to the Federal Communications Commission, Washington 25, D.C., and send it to WHRC in time for us to have copies made and submitted to the FCC by the deadline of June 1, 1949.

We are extremely grateful for your cooperation in this matter.

1 have been publishing your business not even ed before 100K visit at  
1000000 visit and still no traffic . visitors not no bled ed any  
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1000000 visit and still no traffic . visitors not no bled ed any

Haverford College  
Haverford, Pa.

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C.

In the Matter of : :

Amendment of Part 15 of :  
the FCC Rules Governing :  
Restricted Radiation Devices :

DOCKET NO. 9288

Haverford, Pa.  
May 10, 1949

Hon. Commissioners:

In regard to the proposals which you have recently made for  
further regulation of college radio stations, I should like to  
express both my concern and the concern of the Haverford College  
community in the matter.

It would seem that the present status of college stations  
could be maintained, keeping at the same time within legal opera-  
tional limits set down under FCC supervision. Forcing college stations  
into Educational FM would entail a great change and cost as well as  
automatic elimination of most of the college radio audience, since so  
few members of the community have FM receivers. The possibility of  
reorganizing under standard broadcast regulations would also be very  
difficult because students at similar liberal arts colleges the size  
of ours are not likely to have the necessary FCC licenses.

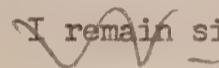
*38*  
Due to these proposed regulations, therefore, WHRC of Haverford  
as well as the majority of other college stations <sup>were instituted</sup> will be forced to  
shut down altogether. This, I am sure you will agree, would be a great  
loss. College radio is an important aspect of campus life and performs  
a definite service to the college community. It is an extra-curricular  
activity which combines the creative, cultural, and technical aspects  
of education within its scope. Even in liberal arts colleges where  
there are often no official radio courses offered, this activity has  
contributed valuable experience to men <sup>many students</sup> who have subsequently entered  
the field in announcing, administrative, or technical capacities.  
Other valuable aspects of cultural life which are amplified by college  
broadcasting are the fields of dramatics, speech, and music.



To my knowledge there has been excellent cooperation between such stations as WHRC and ~~other~~ standard broadcast stations. Some college stations are actually sponsored by larger stations and many contribute talent and programs to their schedules. There seems little likelihood that they would regard college stations either as rivals or as strong enough to interfere with their frequencies.

In conclusion I would like ~~respectfully~~ to suggest that the commission reconsider ~~their~~ proposal with an eye to revising the present regulations governing college broadcasting. Such a revision could be based on reasonable though strictly observed radiation limits checked possibly by field strength readings at regular intervals, and on associated FCC specifications.

Thanking you for your fair consideration of this proposal,

 I remain sincerely yours,



Reference copy:

Haverford College  
Haverford, Pa.

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C.

In the matter of

Amendment of Part 15 of  
the F.C.C. Rules Governing  
Restricted Radiation Devices :

DOCKET NO. 9288

May 12, 1949

Hon. Commissioners:

Those of us who have been interested for a good many years in college broadcasting stations regret the proposed restrictions which will make impractical further operation of these stations. This activity is an important one on the campus from many points of view. It is a service enjoyed and appreciated by the college community; it offers opportunity for constructive extracurricular activity to those interested in dramatics and public speaking and opportunity for actual experience in programming and broadcasting to students seriously interested in radio work as a career. College broadcasting stations give the student actual work in radio design, construction and servicing that is of incalculable value to prospective technicians; in other words, the college station serves as a laboratory to the undergraduate interested in radio engineering.

There has been an earnest effort to reduce excess radiation, and it is expected that any necessary regulations laid down by the Commission would receive serious attention from station technicians and personnel with a minimum of FCC supervision.

Educational FM does not seem feasible for the following reasons: (1) there are few FM receivers at the college, (2) licensed engineers (radio telephone 1st class) are seldom found among the students, (3) the expense of changing equipment is too great.

These stations could operate more effectively under new rules directly applicable to them, rather than under those set up for commercial broadcasting stations.

I recommend, therefore, that the Federal Communications Commission formulate specific regulations for the operation of college broadcasting stations and that hearings be held on the matter.

Respectfully submitted,

(Signed) T.A. Bonham  
Assistant Professor in Physics  
Faculty Adviser to Station WHRC



Haverford College  
Haverford Pa.

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C.

In the Matter of :

Amendment of Part 15 of :  
the FCC Rules Governing :  
Restricted Radiation Devices :

DOCKET NO. 9268

Haverford, Pa.  
May 13, 1949

Hon. Commissioners:

In regard to the proposals which you recently have made for the further regulation of college radio stations, I should like to express both my concern and the concern of the Haverford College community in the matter.

It would seem that the present status of college stations could be maintained, keeping at the same time within legal operational limits set down under FCC supervision. Putting college stations into Educational FM would entail a great change and cost and would eliminate most of the college radio audience, since so few members of the community have FM receivers. The possibility of reorganizing under standard broadcast regulations would also be very difficult because students at similar liberal arts colleges the size of ours are not likely to have the necessary FCC licenses.

If these proposed regulations were instituted, WHRC of Haverford would be forced to shut down altogether. This, I am sure you will agree, would be a great loss. College radio is an important aspect of campus life and performs a definite service to the college community. It is an extra-curricular activity which combines the creative, cultural, and technical aspects of education within its scope. Even in liberal arts colleges where there are often no official radio courses offered, this activity has contributed valuable experience to many students.

To my knowledge there has been excellent cooperation between such stations as WHRC and standard broadcast stations. Some college stations are actually sponsored by larger stations and many contribute talent and programs to their schedules. There seem little likelihood that they would regard college stations either as rivals or as strong



enough to interfere with their frequencies.

In conclusion I would like to suggest that the commission reconsider its proposal with an eye to revising the present regulations governing college broadcasting. Such a revision could be based upon reasonable though strictly observed radiation limits checked possibly by field strength readings at regular intervals, and on associated FCC specifications.

Thank you for your fair consideration of this proposal.

Sincerely yours,

Gilbert F. White

Gilbert F. White

President, Haverford College

GW/lha



Haverford College  
Haverford, Pa.

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C.

In the Matter of :

Amendment of Part 15 of :  
the FCC Rules Governing :  
Restricted Radiation Devices :

DOCKET NO. 9288

Haverford, Pa.  
May 13, 1949

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Thank you for your fair consideration of this proposal.

Sincerely yours,

*Gilbert F. White*

Gilbert F. White

President, Haverford College

GFW/lba



Reference Copy:

Haverford College  
Haverford, Pa.

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C.

In the Matter of : :

Amendment of Part 15 of :  
the FCC Rules Governing :  
Restricted Radiation Devices :

DOCKET NO. 9288

Haverford, Pa.  
May 13, 1949

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Page 2: 5.13.49

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Thank you for your fair consideration of this proposal.

Sincerely yours,

(signed)  
Gilbert F. White

President, Haverford College

GFW/lha

jcb



Reference Copy:

W I B C  
SEABOARD RADIO BROADCASTING CORP.  
PHILADELPHIA 2, PA.

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C.

In the Matter of : :

Amendment of Part 15 of :  
the F.C.C. Rules Governing:  
Restricted Radiation :  
Devices : :

DOCKET NO. 9238

May 23, 1949

Hon. Commissioners:

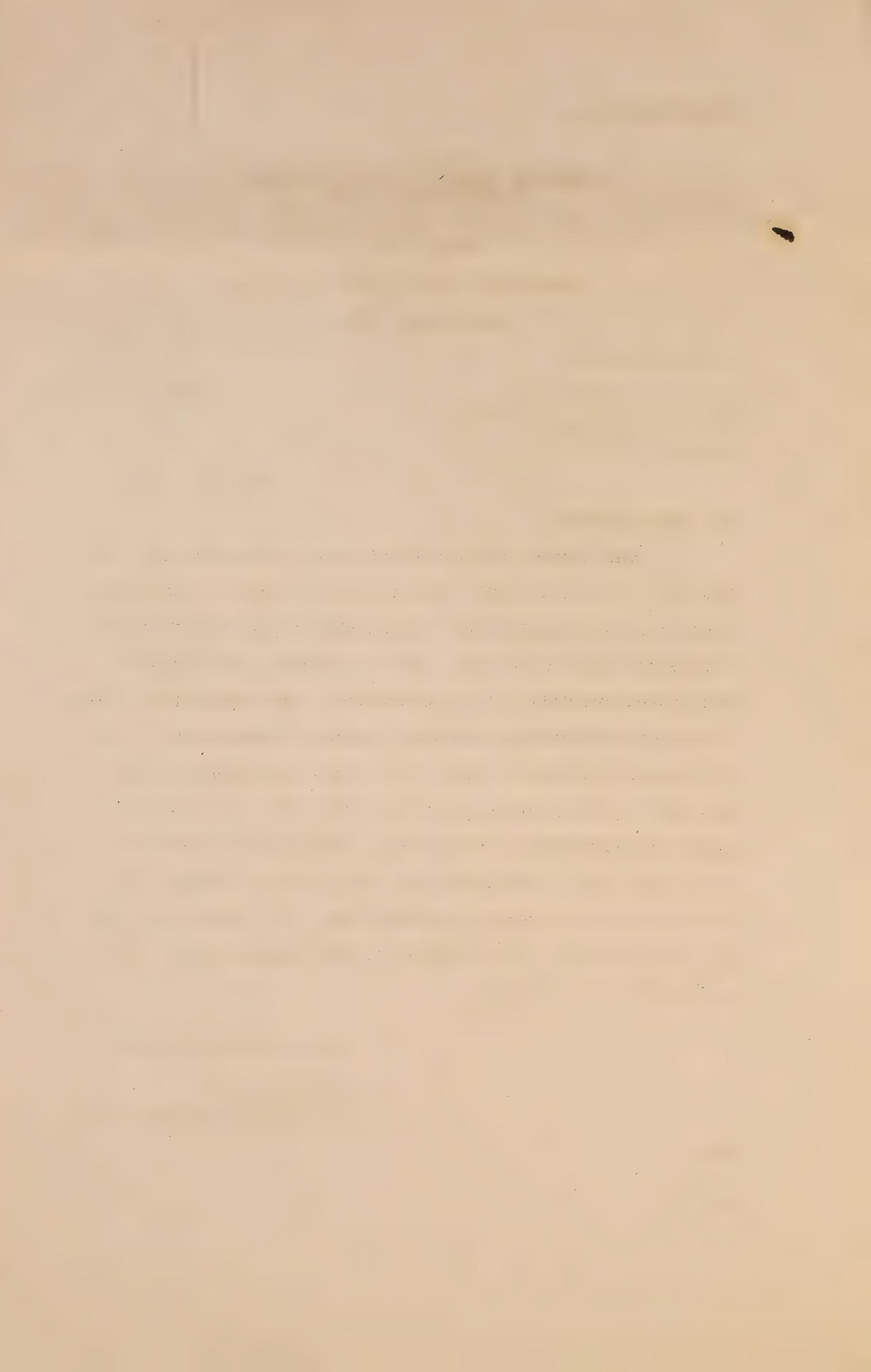
The purpose of this brief is to recommend that specific provision in the FCC rules be made for campus radio stations, and that hearings be held on the matter. This appeal is made on behalf of college radio in general and station WHRC (Haverford College) in particular. The educational value of this extracurricular activity cannot be exaggerated. The cooperation extended to WIBG by WHRC and other campus radio stations has been both generous and valuable. As a training ground for commercial broadcasting, college radio centers should not only be continued but encouraged to expand. The creative aspect of college broadcasting, i.e. dramatics, writing and producing, will continue to add stimulus and a finer appreciation for the arts.

Respectfully submitted.

(signed)  
Paul Collins  
Educational Director WIBG

PC/sm

jcb



HAVERFORD COLLEGE  
Haverford, Penna.

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C.

In the Matter of : :

Amendment of Part 15 of :  
the FCC Rules Governing :  
Restricted Radiation Devices :

DOCKET NO. 9288

Haverford, Pa.  
July 28, 1949

Hon. Commissioners:

I am writing to you concerning your more recently proposed regulations for college radio stations, and would like to advocate the retention of the present regulations, with some necessary modifications, of course.

Unfortunately, Haverford's WHRC as well as many other college stations, would be unable to meet your proposal of Educational FM status. Not only would it be financially almost insurmountable, but it would also assume that the majority of our listeners on Haverford's campus have FM sets which is not the case. There are few if any FM sets on the campus. Thus to follow your proposal would automatically eliminate the radio audience in which we are most interested.

Another proposal which you have made is that of transforming the present broadcasting set-up to meet standard broadcast regulations. This is also financially prohibitive, not to mention the fact that it would necessitate employing FCC licensed engineers from outside. In a liberal arts college such as Haverford, there are not likely to be many FCC licensed engineers among the student body.

It seems to me that the best solution to this problem would be a revision of the regulations along the present line. Such revision would naturally have to include a more rigid and methodical control of excess radiation from the carrier system without cutting it down to such a degree that it is impossible to transmit at all. This revision would naturally have to be reasonable on the one hand and strictly observed on the other, and as it is about the only alternative which is left to smaller campus stations, we feel you should give it fair consideration.

In closing, I would like to mention the fact that WHRC's relations (and as far as we know the relations of other college stations in the vicinity) with the larger commercial stations has been of the best. We often cooperate in programming and just recently a network has been formed here sponsored by WFIL. In other words, to the best of our knowledge, there has been no indication of conflict either in radiation or personal contacts with the neighboring stations.

Respectfully submitted for your kind consideration,

I remain, sincerely yours,

Brooks B. Cooper  
President, WHRC



File 28

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON 25, D. C.

August 10, 1949

ADDRESS ALL COMMUNICATIONS  
TO THE SECRETARY

In reply refer to  
8034

Haverford College  
Haverford, Pennsylvania

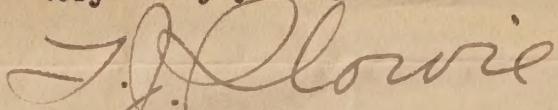
Attention: Brooks B. Cooper,  
President, WHRC

Gentlemen:

Receipt is acknowledged of your recent written comments submitted in connection with Docket No. 9288. In order to simplify its consideration of the problems presented, the Commission recently adopted an Order which in effect separates collegiate "broadcast" matters from other restricted radiation devices. It is accordingly suggested that any supplemental comments which you may care to submit be designated "Docket 9288, Part D".

In view of the fact that the Commission may issue a supplemental notice of proposed rule making in the near future, the date for filing comments in this proceeding has been indefinitely advanced. No formal hearing or oral argument has as yet been designated; however, you will be notified and afforded an opportunity to participate in any hearing or argument that should be scheduled in the future.

Very truly yours,

  
T. J. Slowie  
Secretary

